



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/587,104	03/04/2008	Zoltan-Josef Horvath	OST-061157	9352

22876 7590 08/12/2009
FACTOR & LAKE, LTD
1327 W. WASHINGTON BLVD.
SUITE 5G/H
CHICAGO, IL 60607

EXAMINER

HOQUE, FARHANA AKHTER

ART UNIT	PAPER NUMBER
----------	--------------

2831

MAIL DATE	DELIVERY MODE
-----------	---------------

08/12/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/587,104	Applicant(s) HORVATH ET AL.	
	Examiner FARHANA HOQUE	Art Unit 2831	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 March 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 March 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>3/4/2008</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This Office Action is in response to the Applicant's communication filed on 3/4/2008 and preliminary amendment concurrently filed therewith. In virtue of this amendment, claims 1-23 are currently presented in the instant application.

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on 3/4/2008 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Drawing

2. The drawings submitted on 3/4/2008 have been accepted.

Priority

3. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Germany on 1/22/2004. It is noted, however, that applicant has not filed a certified copy of the 102004003456.7 application as required by 35 U.S.C. 119(b).

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-3, 5, 9-16, 18, 22 and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Walker et al. (U.S. Patent No. 5,759,371).

With respect to claim 1, Walker et al. discloses a method for determining the thickness of a layer of lacquer which is applied by electrophoretic immersion coating to an article [100] (see Fig. 4) wherein the article [100] (see Fig. 4) for immersion coating is immersed in a lacquer immersion bath [20] (see Fig. 4) containing lacquer and forms an electrode which generates, together with at least one counter electrode [104] (see Fig. 4), an electrical field that comprising the following steps:

a) determining the electrical charge flowing through the article [100] (see Fig. 4) during immersion coating (col. 8, claim 1, lines 46-48).

b) determining the surface of the article [100] (see Fig. 4) exposed to the lacquer [20] (see Fig. 4; also col. 7, lines 56-58).

c) determining are the thickness of the layer of lacquer based on the electrical charge determined in step a) and the surface determined in step b) (col. 9, claim 6, lines 15-17).

With respect to claim 2, Walker et al. discloses the method of claim 1, wherein the electric current flowing through the article [100] (see Fig. 4) during immersion coating is measured for determining the electric charge in step a) (col. 8, claim 1, lines 46-48).

With respect to claim 3, Walker et al. discloses the method of claim 1 that wherein the surface of the article [100] (see Fig. 4) is determined in step b) using the maximum starting current which flows through the article [100] (see Fig. 4) at the start of immersion coating (col. 4, lines 26-30).

With respect to claim 5, Walker et al. discloses the method of claim 1, wherein the thickness of the layer of lacquer is determined in step c) by taking into account the pH of the lacquer [20] (see Fig. 4; col. 9, claim 6, lines 15-17; also col. 9, claim 7, lines 18-22).

With respect to claim 9, Walker et al. discloses the method of claim 1, wherein the thickness of the layer of lacquer is determined in step c) by taking into account the spacing between the article [100] (see Fig. 4) and the at least one counter electrode [104] (see Fig. 4).

With respect to claim 10, Walker et al. discloses the method of claim 1, wherein the voltage applied between the electrode [100] (see Fig. 4) and the at least one counter electrode [104] (see Fig. 4) is controlled in such a way that the starting current at the start of immersion coating at least approximately matches a predetermined value (col. 3, lines 41-51).

With respect to claim 11, Walker et al. discloses the method of claim 10, wherein the predetermined value depends on parameters of the lacquer (col. 9, claim 4, lines 8-11).

With respect to claim 12, Walker et al. discloses the method of claim 1, wherein the immersion coating is finished as soon as the determined layer thickness has reached a predeterminable target value (col. 1, lines 30-35).

With respect to claim 13, Walker et al. discloses a system for determining the thickness of a layer of lacquer which is applied by electrophoretic immersion coating to an article [100] (see Fig. 4) comprising:
an immersion bath [20] (see Fig. 4) for receiving a lacquer in which the article [100] (see Fig. 4) can be immersed,
a voltage source [102] (see Fig. 4) of which one pole (see Fig. 4) can be connected to the article [100] (see Fig. 4) and of which the other pole (see Fig. 4) is connected to at least one counter electrode [104] (see Fig. 4) reaching into the immersion bath,

a charge measurement apparatus for determining the electrical charge flowing through the article [100] (see Fig. 4) during immersion coating a computer [130] (see Fig. 4) which determines the thickness of the layer of lacquer from the charge measured by the charge measurement apparatus and the surface (col. 7, lines 56-58) of the article [100] (see Fig. 4) exposed to the lacquer [20] (see Fig. 4).

With respect to claim 14, Walker et al. discloses the system of claim 13, wherein the charge measurement apparatus means for determining the charge comprises an ammeter (col. 2, lines 36-38).

With respect to claim 15, Walker et al. discloses the system of claim 13, wherein the maximum starting current which flows through the article [100] (see Fig. 4) at the start of immersion coating, can be stored in the computer [130] (see Fig. 4).

With respect to claim 16, Walker et al. discloses the system of claim 15, wherein the computer [130] (see Fig. 4) determines the surface of the article [100] (see Fig. 4) exposed to the lacquer [20] (see Fig. 4) from the maximum starting current (col. 7, lines 56-58).

With respect to claim 18, Walker et al. discloses the system of claim 13, comprising a pH sensor (col. 9, claim 7, lines 18-22) which is connected to the computer [130] (see Fig. 4) for measuring the pH factor of the lacquer [20] (see Fig. 4).

With respect to claim 22, Walker et al. discloses the system of claim 13, comprising a control device (col. 7, lines 21-26) which is configured to control the voltage applied between the electrode [100] (see Fig. 4) and the at least one counter electrode [104] (see Fig. 4) in such a way that the starting current at the start of immersion coating has a predetermined value [102] (see Fig. 4; also col. 2, lines 51-55).

With respect to claim 23, Walker et al. discloses the system of claim 13, comprising a controller (col. 7, lines 21-26) which is configured to terminate the immersion coating as soon as the specific lacquer thickness has reached a predeterminable value (col. 1, lines 30-33).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 4, 6-8, 17 and 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nobutoh et al. (U.S. Publication No. 2003/0177978 A1).

With respect to claim 4, Walker et al. discloses the method of claim 1.

Walker et al. does not disclose the thickness of the layer of lacquer being determined in step c) by taking into account the temperature of the lacquer.

Nobutoh et al. teaches a painting facility management system which discloses the thickness of the layer of lacquer being determined in step c) by taking into account the temperature of the lacquer (col. 3, para [0040], line 7- col. 4, para [0040] line 2).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Walker et al. to include a step to determine the thickness of the layer of lacquer by taking into account the temperature of the lacquer as taught by Nobutoh et al. in order to achieve uniformity of the coating surface and to maintain a good finishing condition of the coating (see col. 1, para [0009], lines 1-3; also col. 1, para [0011], lines 1-5).

With respect to claim 6, Walker et al. discloses the method of claim 1.

Walker et al. does not disclose the thickness of the layer of lacquer being determined in step c) by taking into account the electrical conductivity of the lacquer.

Nobutoh et al. teaches a painting facility management system which discloses the thickness of the layer of lacquer being determined in step c) by taking into account the electrical conductivity of the lacquer (col. 1, para [0011], lines 6-10).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Walker et al. to include a step to determine the thickness of the layer of lacquer by taking into account the electrical conductivity of the lacquer as taught by Nobutoh et al. in order to achieve uniformity of the coating surface

Art Unit: 2831

and to maintain a good finishing condition of the coating (see col. 1, para [0009], lines 1-3; also col. 1, para [0011], lines 1-5).

With respect to claim 7, Walker et al. discloses the method of claim 1.

Walker et al. does not disclose the thickness of the layer of lacquer being determined in step c) by taking into account the solids content of the lacquer.

Nobutoh et al. teaches a painting facility management system which discloses the thickness of the layer of lacquer being determined in step c) by taking into account the solids content of the lacquer (col. 3, para [0040], line 7- col. 4, para [0040] line 2).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Walker et al. to include a step to determine the thickness of the layer of lacquer by taking into account the solids content of the lacquer as taught by Nobutoh et al. in order to achieve uniformity of the coating surface and to maintain a good finishing condition of the coating (see col. 1, para [0009], lines 1-3; also col. 1, para [0011], lines 1-5).

With respect to claim 8, Walker et al. discloses the method of claim 1.

Walker et al. does not disclose the thickness of the layer of lacquer being determined in step c) by taking into account the density of the lacquer.

Nobutoh et al. teaches a painting facility management system which discloses the thickness of the layer of lacquer being determined in step c) by taking into account the density of the lacquer (col. 1, para [0009], lines 1-10).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Walker et al. to include a step to determine the thickness of the layer of lacquer by taking into account the density of the lacquer as taught by Nobutoh et al. in order to achieve uniformity of the coating surface and to maintain a good finishing condition of the coating (see col. 1, para [0009], lines 1-3; also col. 1, para [0011], lines 1-5).

With respect to claim 17, Walker et al. discloses the system of claim 13.

Walker et al. does not disclose a temperature sensor, which is connected to the computer, for determining the temperature of the lacquer.

Nobutoh et al. teaches a painting facility management system which discloses a temperature sensor, which is connected to the computer, for determining the temperature of the lacquer (col. 3, para [0040], line 7- col. 4, para [0040] line 2).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Walker et al. to include a temperature sensor being connected to the computer, for determining the temperature of the lacquer as taught by Nobutoh et al. in order to achieve uniformity of the coating surface and to maintain a good finishing condition of the coating (see col. 1, para [0009], lines 1-3; also col. 1, para [0011], lines 1-5).

With respect to claim 19, Walker et al. discloses the system of claim 13.

Walker et al. does not disclose a conductivity sensor, which is connected to the computer, for measuring the conductivity of the lacquer.

Nobutoh et al. teaches a painting facility management system which discloses the thickness of the layer of lacquer being determined in step c) by taking into account the electrical conductivity of the lacquer (col. 1, para [0011], lines 6-10).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Walker et al. to include a conductivity sensor, which is connected to the computer, for measuring the conductivity of the lacquer as taught by Nobutoh et al. in order to achieve uniformity of the coating surface and to maintain a good finishing condition of the coating (see col. 1, para [0009], lines 1-3; also col. 1, para [0011], lines 1-5).

With respect to claim 20, Walker et al. discloses the system of claim 13.

Walker et al. does not disclose a sensor, connected to the computer, for determining the solids content of the lacquer.

Nobutoh et al. teaches a painting facility management system which discloses a sensor, connected to the computer, for determining the solids content of the lacquer (col. 3, para [0040], line 7- col. 4, para [0040] line 2).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Walker et al. to include a sensor, connected to the computer, for determining the solids content of the lacquer as taught by Nobutoh et al. in order to achieve uniformity of the coating surface and to maintain a good finishing

Art Unit: 2831

condition of the coating (see col. 1, para [0009], lines 1-3; also col. 1, para [0011], lines 1-5).

With respect to claim 21, Walker et al. discloses the system of claim 13.

Walker et al. does not disclose a density sensor, which is connected to the computer, for measuring the density of the lacquer.

Nobutoh et al. teaches a painting facility management system which discloses a sensor, connected to the computer, for determining the density of the lacquer (col. 1, para [0009], lines 1-10).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Walker et al. to include a sensor, connected to the computer, for determining the density of the lacquer as taught by Nobutoh et al. in order to achieve uniformity of the coating surface and to maintain a good finishing condition of the coating (see col. 1, para [0009], lines 1-3; also col. 1, para [0011], lines 1-5).

Citation of Pertinent Prior Art

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Inoue (U.S. Patent No. 4,851,102) discloses an electrodeposition coating system.

Jackson et al. (U.S. Patent No. 4,452,680) discloses an electrocoating apparatus and method of use thereof.

De Vittorio et al. (U.S. Patent No. 3,658,676) discloses a monitoring apparatus and process for controlling composition of aqueous electrodeposition paint baths.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to FARHANA HOQUE whose telephone number is (571)270-7543. The examiner can normally be reached on Monday - Friday 8:30-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego Gutierrez can be reached on (571) 272-2245. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/FARHANA HOQUE/
Examiner, Art Unit 2831

/Diego Gutierrez/
Supervisory Patent Examiner,
Art Unit 2831

Application/Control Number: 10/587,104
Art Unit: 2831

Page 15

Application/Control Number: 10/587,104
Art Unit: 2831

Page 16

Application/Control Number: 10/587,104
Art Unit: 2831

Page 17